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United States General Accounting Office

Report to the Acting Administrator, Small Business Administration

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DATA PROCESSING

SBA Needs to Strengthen Management of its Computer Systems

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GAO

United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

B-206599

August 29, 1986

The Honorable Charles L. Heatherly
Acting Administrator
Small Business Administration

Dear Mr. Heatherly:

This report presents the results of our evaluation of the Small Business Administration's data processing activities. We initiated this review at the request of the Chairman, Subcommittee on General Oversight and the Economy, House Committee on Small Business. The Subcommittee asked us to convey the results in a report issued directly to you.

This report contains recommendations to you in chapter 4. As you know, 31 U.S.C. §720 requires the head of a federal agency to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations no later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more that 60 days after the date of the report. We would appreciate receiving copies of your statement to the committees.

We are sending copies of this report to the Director, Office of Management and Budget; the Chairmen, House and Senate Committees on Appropriations; House Committee on Government Operations; Senate Committee on Governmental Affairs; House and Senate Committees on Small Business; Subcommittee on General Oversight and the Economy, House Committee on Small Business; the Administrator, General Services Administration; and other interested parties.

Sincerely yours,

Daniel C. White
for Warren G. Reed
Director

Executive Summary

Purpose

The Small Business Administration (SBA) spent about $12 million for data processing in fiscal year 1985. Automated information systems support all major agency programs, including direct and guaranteed lending programs totaling $14 billion in outstanding loans. SBA's ability to effectively administer these programs is highly dependent on the timeliness, accuracy, and completeness of the information in the agency's automated information systems.

At the request of the Chairman, Subcommittee on General Oversight and the Economy, House Committee on Small Business, GAO reviewed whether SBA's

- automated systems assist its regional and district offices in carrying out the agency's mission, and
- information resources management activities are adequate, appropriate, and effective.

Background

The fundamental mission of SBA is to aid, counsel, and protect the interests of small businesses to help them better compete in the open market. Accordingly, the agency administers a variety of loan programs and provides management and technical assistance through a network of over 100 field offices.

SBA has a central office primarily responsible for acquiring, developing, and managing the agency's automated information resources. Also, private contractors play a vital role in developing and maintaining software for the automated systems and in operating a computer information center. In fiscal year 1985, the agency let 15 contracts totaling $4.2 million or 35 percent of its data processing budget.

Field offices are the principal providers and users of information maintained in the agency's data bases. In total, these locations typically enter over 350,000 transactions monthly into information systems.

Results in Brief

Certain centrally developed data processing systems supporting key agency missions lacked the quality and kind of information to carry out the agency's program objectives. In addition, lack of systematic participation of field offices in the design, operation, and post-implementation review of central systems has contributed to the ineffectiveness of the agency's central systems in meeting user needs.

Weaknesses in information resources management activities have led to (1) inadequate long-range planning for data processing, (2) an inability to measure and evaluate contractor performance on data processing contracts, and (3) use of unsound procurement practices in acquiring a minicomputer. Audit coverage by SBA's Office of Inspector General has been insufficient, limiting the agency's ability to identify and correct deficiencies such as those GAO identified.

Principal Findings

Need for Field-office Participation

Federal guidelines require agencies to involve users in the development and operation of automated systems. GAO's review indicated that SBA did not systematically involve field offices in the design and development of six primary automated systems that support major programs. Nor did it have an ongoing review process for field users to identify and report system problems after systems became operational. Regarding their effectiveness, GAO observed that certain systems

- produced inaccurate and untimely reports that were needed for program management;
- did not provide access to some data in the central systems; and
- lacked information required by the field offices to better manage agency programs.

As a result, field offices either maintained manual records that duplicated information in the central systems or developed local automated systems to alleviate information problems with central systems. (See pp. 13 to 16.)

Need for Control of Information Resources Management Activities

SBA has not formalized its data processing planning or adequately included field-office users and top management in this process. As a result, the long-range plan for data processing was not based on the needs of field-office users and could not be used effectively as a management tool to guide the acquisition and development of information resources to meet mission needs. (See pp. 20 to 22.)

SBA's data processing contracts lacked comprehensive statements of work to measure contractor performance or to control costs. Federal

guidelines recommend that contract provisions clearly define performance standards to assess performance. The guidelines also state that contracts should include comprehensive statements of the work to be performed, timetables, and deliverables. (See pp. 23 to 25.)

Federal regulations prohibit contracts under which contractor personnel are supervised by government employees unless specifically approved by statute. Nine of the agency's 15 data processing contracts in fiscal year 1985 involved contractor personnel being supervised by government employees. (See pp. 25 and 26.)

The agency acquired a minicomputer by unsound purchase practices and without sufficient procurement and legal staff review. The minicomputer was a prototype to transmit data between central- and field-office computers and to permit users to access data. SBA officials changed the technical requirements for the minicomputer without notifying all vendors; selected the minicomputer based on word processing features not justified in the acquisition process; and waived established telecommunications requirements. As a result, the minicomputer bought could not serve its intended purpose. (See pp. 26 to 30.)

SBA's Inspector General performed few reviews either of systems acquisitions or operational systems for its major programs. Thus, the agency did not have assurance through independent, internal reviews that systems were well designed or were working properly. The Assistant Inspector General for Audit cited lack of data processing skills and staff as the reason for not being more involved in audits of data processing activities. (See pp. 30 to 32.)

Recommendations

To strengthen SBA's management of data processing activities and improve the usefulness of its automated systems, the Acting Administrator should:

- Implement policies and procedures to require field-office user participation during the design and operation of automated systems.
- Establish a comprehensive planning process for information resources management.
- Strengthen contracting procedures for software development, operations, and general-programming and technical-support contracts by requiring the use of statements of work, timetables, and specifications of deliverables.

- Modify its contracts to require contractors to supervise their own employees.
- Strengthen the management of data processing acquisitions by requiring more active involvement from SBA's procurement and legal representatives.
- Intensify reviews of information resource management activities by the Office of Inspector General. (See pp. 35 and 36.)

Agency Comments

The Small Business Administration agreed with all but the last recommendation. The agency stated that it had taken corrective actions that would improve computer operations. Several of these initiatives appear to move in the right direction toward implementing GAO's recommendations. When the recommendations are fully implemented, information resource management activities should improve. SBA said, however, that its current level of automatic data processing audits is all it can do, given its resource level and other demands. GAO still believes that this level is insufficient. (See appendix III for SBA's specific comments and GAO's response to those comments.)

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Abbreviations

GAO	General Accounting Office
SBA	Small Business Administration

Chapter 1

Introduction

The Small Business Administration (SBA) was created by the Congress in 1953 to counsel and champion America's small businesses. Its mission is to help people establish and keep an enterprise and win federal contracts. SBA is the only federal agency whose sole responsibility is to assist this nation's small businesses.

There are approximately 14.3 million businesses, including 3.3 million farms, throughout the United States; SBA defines slightly over 13 million as small. The agency offers various loans and assistance (financial, procurement, management, and advocacy) to eligible small businesses. Businesses owned by women, the socially or economically disadvantaged, the handicapped, veterans, or disaster victims—all of whom might be expected to face unusual difficulty in raising capital and finding markets—are targets for special assistance.

The agency's central office is in Washington, D.C.; its programs are carried out at over 100 field locations, including regional, district, branch, and disaster offices located in every state, Puerto Rico, and Guam.

Information Resources Management at SBA

The Office of Computer Sciences (hereafter Computer Sciences)[1] has responsibility for the design, development, and operation of the agency's automated information systems. Computer Sciences, located in Washington, D.C., has about 80 employees and three major branches—Information Systems (which designs software), Operations (which operates the central computer), and Network Systems (which runs the agency's telecommunications network)—and two units responsible for data base administration, plans, standards, and project control. Computer Sciences uses a Univac 1100-82 central computer to meet its information processing responsibilities. Its telecommunications network links the field offices and the central computer and serves over 200 remote terminals and printers in regional, district, branch, and disaster offices. About $11.8 million was budgeted during fiscal year 1985 for all these activities.

Computer Sciences also has information processing responsibilities that arise from other SBA programs. It receives one-time requests for information from the agency's data files and suggestions for modifications or improvements to existing automated information systems and reports.

[1] In October 1985, the Office of Computer Sciences became the Office of Information Resources Management. Since the activities discussed herein occurred prior to the renaming, we use Computer Sciences.

Each major program is supported by at least one major, centrally operated, automated information system. Some programs depend on multiple systems. For example, SBA's loan programs use individual, automated systems to record and track applications processing, accounting and collection, and loan history. Another system provides field offices with instantaneous information on delinquencies and individual loan-payment history.

SBA's information systems are centralized, with the field offices entering about 350,000 transactions directly into the central systems during an average month. Computer Sciences then processes and stores the data and makes reports available to users (primarily in the field offices). Computer Sciences itself inputs data for several agency systems.

Objectives, Scope, and Methodology

In January 1984, we issued a report[2] critical of SBA's Procurement Automated Source System, which maintains information on small businesses interested in obtaining government contracts. We noted that (1) system information was incomplete and outdated, (2) important system documentation was either outdated or nonexistent, and (3) the agency had no sound mechanism for obtaining user comments and suggestions on the system. Based on these findings, the Chairman of the Subcommittee on General Oversight and the Economy, House Committee on Small Business, requested that we study SBA's computer-based information activities (see appendix I). He asked that we include (1) a detailed review of the automated software for agency loan programs and management information systems and (2) an evaluation of SBA's oversight and management of its data processing activities and the performance and capabilities of its computer-service contractors. We completed preliminary work at agency headquarters and the New York regional and district offices. In subsequent discussions with the Chairman we agreed that our objectives would be to (1) determine how effectively the automated systems were assisting regional and district offices in achieving the agency's mission and (2) evaluate the practices used for planning, acquiring, and managing the information resources.

We conducted our review at and compiled data from SBA's headquarters and at 21 of 101 regional field offices in 4 of 10 regions (see appendix II). We selected the four regions (Chicago, Kansas City, New York, and San Francisco) subjectively for their geographic distribution. We also

[2]An Improved Automated System Would Better Identify Small Businesses Seeking Federal Contracting Opportunities, GAO/IMTEC-84-3, January 12, 1984.

randomly selected, on a statistical basis, 17 district and branch offices within these regions. In addition, at SBA's suggestion, we observed the local automation efforts at the Philadelphia Regional and Detroit District offices. Taken together, all the offices we visited accounted for about 19 percent (about 65,000) of the 350,000 transactions (not including loan payments) entered into the agency's central systems during an average month.

At the 21 field locations we concentrated our review on the timeliness, accuracy, and usefulness of information provided by the six major, centrally operated, automated systems supporting their programs. (The systems were loan-application tracking; portfolio-management display; surety bond; minority small-business financial information; procurement-assistance management; and management assistance.) We interviewed senior management officials, data processing support personnel, and users of these systems to obtain information about data processing management, hardware needs and acquisitions, software needs, and responsiveness to user requests.

In assessing the overall usefulness of information in the central systems, we evaluated how each operating component within each field office used the current automated systems. In reviewing system-generated reports, we focused on those the field staff identified as key—intended to assist in program management. With SBA assistance, we also examined reports produced by locally developed automated systems and management reports prepared manually to ascertain if either duplicated information in the central systems. We also discussed information needs not met by existing central systems supporting each SBA operating component. We observed whether information maintained manually at field locations was used regularly for program management and whether automating the data and combining them with existing central system information could enhance program management.

Our general criteria for evaluating the overall usefulness of information in each system were accuracy and timeliness (i.e., provided to users when needed), inclusion of elements needed regularly, and accessibility by users. We relied on SBA field users to identify reports or systems that generally did not meet these criteria.

We also attempted to verify the problems noted by field-office staff.

- For system reports that they identified as inaccurate, we reviewed the pertinent manual records and compared them to the system reports.

- For system reports they described as untimely, we verified when the field-office staff received the information versus when they needed it.
- For system information they said could not be accessed, we verified that this was a problem with the system rather than user misunderstanding of system operation.
- For information that staff said was needed but was missing from central systems, we reviewed the staff's proposed uses for the information.

At headquarters we met with the Assistant Administrator for Administration to obtain a perspective on planned and ongoing data processing activities, including hardware and software acquisitions, systems development, and contracting for data processing services. We met with representatives from all branches within Computer Sciences to identify and evaluate their responsibility for overseeing and managing SBA's data processing activities. We also met with (1) representatives from program offices using automated systems to accomplish program objectives because we wanted to ascertain whether the systems met their needs and (2) senior officials in the Office of Inspector General to assess the extent of their participation in overseeing information resource management activities. We reviewed the agency's pertinent standard operating procedures, memoranda, regional operating procedures, and contract records to assess whether data processing management issues were adequately addressed.

Our review concentrated on central-office management activities, including contracting, for fiscal years 1984, the first half of 1985, and those planned for 1986-89. Our review began in January 1984 and was generally completed by September 1985. (Where possible, management and financial information have been updated through December 1985.) The views of responsible officials were sought during the course of our work and incorporated in the report where appropriate. We also obtained official SBA comments on a draft of this report (see appendix III). We performed our review in accordance with generally accepted government auditing standards.

Chapter 2

Observations on Systems Effectiveness

Each of SBA's field-office assistance missions—including financial assistance, procurement, management, and minority small-business/capital-ownership development—is supported by one or more automated systems. Our evaluation of these systems was limited to observations of selected locations' selected systems. Those automated systems we observed did not fully meet the needs of program managers and staff. As cited by field-office staff, specific problems that make efficient use of these systems difficult are: inaccurate data in reports, untimely reports (not produced by the system when needed), inaccessibility of certain information in the systems, and systems and associated reports that do not contain needed information. To overcome these problems, some field offices maintain manual records or have developed local automated systems—or both. These initiatives duplicate information in the central-office systems.

Automated systems may produce inaccurate or untimely reports because of erroneous entry of data or defective software (among other reasons). We did not ascertain the extent to which these factors caused problems noted by field-office staff. However, we believe that lack of (1) user involvement in the central systems' initial development, (2) review of central systems after they become operational, and (3) agency policies requiring initial involvement and subsequent review are contributing factors that prevent full system effectiveness.

Problems Noted With Central Systems

The Paperwork Reduction Act of 1980 encourages the acquisition and use of automatic data processing technology to improve service delivery and administration, increase productivity, and reduce the information processing burden for the federal government. At the 21 field locations, we assessed the overall satisfaction of information system users at three levels: data entry, program management, and senior management. We observed that some systems were not effectively supporting the mission of the field locations.

Table 2.1 summarizes the recurring problems noted by field-office staff using agency systems daily. It shows common problems for the six systems that support four major program areas. It also shows those locations where users used manual recordkeeping and local automated systems because of central-system shortcomings. Information in the table and in the following section does not imply that these problems exist at all locations; it should elucidate the types of problems that field-office staff cited as having a negative effect on the credibility of SBA's automated information systems.

Table 2.1: Problems With Central Systems

SBA program area/system	Locations having systems	Locations noting: Inaccurate data on reports	Locations noting: Untimely reports	Locations noting: Data not in system and/or inaccessible	Locations using: Manual recordkeeping	Locations using: Local automated system(s)
Financial assistance						
—Loan applications tracking	17	11	4	9	15	6
—Portfolio-management display	17	0	3	6	5	2
—Surety bond	4	2	3	0	3	
Minority small-business/ capital-ownership development						
—Minority small-business/ financial information	10	2	2	4	8	2
Procurement assistance						
—Procurement-assistance management/ certificate of competency	4	0	4	0	4	0
Management assistance						
—Management assistance	13	4	3	3	10	2

Inaccurate Reports

Information on certain reports produced by four of the six systems we reviewed was inaccurate and did not provide program managers and staff with a true picture of program operations. For example, two of the four field locations using the automated system for the surety bond guarantee program (which guarantees payment to surety bond companies) received management reports containing inaccurate information.

Additionally, one regional office we visited listed in automated reports about $115 million in surety bonds issued during fiscal year 1985. Manual records—which we verified against source documents—for the same period showed about $130 million. This region's surety bond coordinator stated that because the central system produced inaccurate information, the regional office had to rely on manual records to produce usable information for monitoring the program.

Another regional office using manual records to summarize its surety bond activity also received erroneous reports from the central system. Here we observed that manual sales records were prepared from actual sales documents that were then mailed to the central office for data processing. After processing, the central office mailed computer-generated summary reports to the regional office. According to this region's staff, the central-system reports were often grossly inaccurate. For

example, the June 30, 1984, sales report was overstated by about $22 million (or 40 percent) more than the region's manually prepared records showed. Because of this error, regional staff considered the central-system report useless. To improve the reports' accuracy, the surety bond system was redesigned and implemented in December 1985. During our review, information was not available for us to determine whether the problems with accuracy were corrected.

Untimely Information

Central systems produced some reports on an untimely basis—they were not received by the field locations we visited when they were needed. For example, because of untimely reports, the central system supporting the certificate of competency program did not adequately meet the needs of program staff in the offices we visited. (The certificate of competency program is intended to ensure fair treatment of small businesses that compete for federal contracts.)

Under this program, a small business may appeal to SBA when another agency rules that the small business lacks the responsibility to carry out the contract. Partly because SBA must rule on these appeals within 15 days, it developed an automated tracking system for the regional offices. This system was designed to (1) account for appeals in process and (2) inform the central office of how well the regional offices are complying with the 15-day requirement. Information on the status of individual appeals is prepared manually by the regional offices and mailed to the central office for data entry. Although the system may meet its oversight requirement, it was not being used to aid program management at any of the four regional offices we visited. Staff have cited untimely receipt—as a routine, monthly rather than within 15 days—as the principal reason why the information could not be used. As currently designed, the system produces these reports only monthly. Staff said that most appeals were reviewed by the regions and that competency rulings were made before any announcement appeared in the automated reports. So staff relied on manual records to track rulings.

Some Information in Automated Systems is Inaccessible to Users

One limitation noted by field-office staff for four of the six systems we reviewed was that users could not retrieve all the information necessary for their needs (see table 2.1). For example, finance-division officials from 9 of the 17 field offices having the loan-application system said they could not obtain certain information despite its being in this system's data base. The system as designed precluded users from accessing the number of loans to applicants having a specific industrial code

and particular categories of applicants. Field officials stated that they frequently needed this type of information for management analysis and for responding to congressional, public, and media inquiries. Staff relied on manual records or local automated systems to accurately gain this information.

Another system that failed to permit user access to certain needed data was the financial-information system that supports the minority small-business/capital-ownership development program. The system includes information on letters of credit, advance payments, business-development expenses, contract value, and other contractual and financial information related to program participants. In one case, however, information on contract value could not be extracted from the system by either the central office or the field offices. So central-office program staff required that field offices provide a listing of all minority small-business contracts worth $100,000 or more. Several field officials expressed concern that neither central-office nor field-office users could extract this information from the automated systems. Field offices, therefore, relied on their manual records for the information.

Automated Systems Do Not Contain Some Needed Information

Field representatives also noted that four automated systems did not contain data needed for effective program management (see table 2.1). For example, district-office loan officers said that, despite the agency's automated loan-tracking systems, more automated information was needed for problem loans under liquidation. Should a borrower cease paying a loan, SBA must correct the situation. Corrective steps extend from a "workout" (agreement with the borrower to resume payment at an acceptable level) to full liquidation (where assets are sold, proceeds applied to the loan, and any remaining balance is charged off). Because the value of assets can deteriorate over time, the liquidation program's goal is to "take action that preserves the interest of the government so as to assure maximum recovery in the minimum time."

The liquidation process can be lengthy. At one district office we visited the average period was 786 days. This was caused partly by the time needed to resolve bankruptcy proceedings and partly by litigation that involved third parties. It is, therefore, critical that SBA's management carefully monitor the status of thousands of liquidation cases to ensure that the government's interest is protected in a timely manner. Several field representatives told us that an automated "tickler" file would be of significant help in tracking when legal and management actions were required on each liquidation case. They noted that failure of timely

action can result in significant financial loss to the government. However, because the existing automated systems do not contain the detailed information for tracking liquidation cases, extensive manual records must be maintained. Although not representative of the situation in all regions, the district offices in one region we visited had 11 separate types of manual records on liquidations.

Field Locations Duplicate Manual Records or Develop Automated Systems

As noted before, field offices depend on manual systems or locally developed automated systems because of problems with the central systems. Information maintained by these recordkeeping systems often duplicates information in the central-office automated systems.

Some Field Offices Rely on Manual Records

For all six programs, some field offices we visited relied on manual records to assist in management. For all six programs, information maintained on manual logs and records was similar or identical to data maintained in central-office automated systems. The program requiring highest use of manual records, at 15 of the 21 field offices, was the loan-application tracking system. At the 15 locations, we observed staff preparing and maintaining logs and records by hand; information logged included borrower name, loan-application receipt date, the loan officer's name, and a veteran and/or minority classification code. These data elements were also in the central-office loan-application tracking system. The manual records were kept because this information could neither be accessed nor summarized by the automated system.

At eight locations the minority small-business/capital-ownership development program staff also maintained manual records to manage their program. The subcontractor's name, contract value, and the servicing district office were recorded both in a manual log and in the centrally operated, financial-information system. Staff at these locations maintained manual records because they (1) questioned the accuracy of the central system's information, (2) found system reports to be untimely, and (3) noted that needed data were not in the system and/or were inaccessible.

Some Field Offices Rely on Local Automated Systems

Eight field offices developed local automated systems to provide more timely, useful, accurate, and complete information on program operations than the central systems contained. The local systems duplicated information in four central-office systems.

One regional office developed a pilot system approved by headquarters. The system's goal was to use automation to increase productivity in each office and the region as a whole. The planning document that sought approval for this system stated that the need arose from inadequacies of the central systems.

- Central system reports came too late to be useful.
- Data were manually computed even though they existed in the central systems.

This local automated system was considered a success by regional management who now rely on it because it performs many additional functions that were lacking in the central systems. For example, we were told that the central systems could have performed only a few of the 180 applications that were developed in the local system.

We observed, however, that all the locally developed automated systems contained data that largely duplicated information in the central systems. For example, because of weaknesses in the central systems, one location we visited developed an automated loan-application logging system similar to the central-office's loan-application tracking system. Each time a loan application entered the central system, it entered the local system. Of the 15 data elements in the local system, 13 (86.7 percent) also appeared in the central system. At another field location we visited, a district office had developed—because of weaknesses in the central systems—a local system to support the minority small-business/capital-ownership development program. We determined that about 47 percent of the data elements in the local system also appeared in the central systems.

Field Users Have Little Participation in System Development

Generally accepted standards for developing automated information systems require that they be designed to meet user needs. Office of Management and Budget Circulars A-71 and A-130 require that information on these needs be systematically collected and validated to ensure that they are provided for in the resulting system. Otherwise, it may not meet user needs and may hinder rather than support efficient operation of agency programs. After systems become operational, agencies

should—in accordance with the above-mentioned guidelines—conduct reviews that regularly gain comment from users on the systems' effectiveness and usefulness.

Although field offices use the agency's automated systems thousands of times daily, as of December 31, 1985, SBA had no systematic method for obtaining documented information on user needs from field offices. We believe that the lack of user involvement significantly contributed to some of the weaknesses in the systems we reviewed. The Computer Sciences office is responsible for the efficient design, development, and operation of SBA's automated systems. This office, however, has no written policies or procedures requiring systematic involvement from users in the design and development of automated systems.

A Computer Sciences official stated that, when developing the agency's automated systems, his office had relied mainly on the central program offices to define all user requirements. Officials in four of the six program offices that operate the six systems we reviewed stated that they had no formal method for obtaining user input for system development. They believed their knowledge of field operations to be sufficient to define requirements for both central- and field-office users. In contrast, representatives from two program offices told us they contacted selected field offices to determine their requirements.

Lack of systematic participation in system development was confirmed in our visits to selected field offices. Except for four offices, which had the opportunity to provide input on the management-assistance system, field staff in the 21 offices we visited told us they were not invited to participate in system development. Two top officials in one district office told us that they believe the lack of user participation had created a gap between the automation needed and what was available.

Periodic reviews of system requirements over the life of the automated systems should help SBA determine whether user requirements continue to exist and the system continues to meet the needs that caused its development. Although SBA had no review process that involved system users, we noted some examples of users writing the central office to identify deficiencies in systems or reports. However, SBA did not have a systematic method—periodic meetings, telephone interviews, structured questionnaires, or visits—to obtain feedback from users on system usefulness.

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Chapter 3

Improvements Needed in Key Information Resources Management Activities

The Paperwork Reduction Act of 1980 established a mandate for federal agencies to perform their information activities efficiently, effectively, and economically. People, hardware, software, and information all play an important role in meeting this mandate. Effective management of automated information resources includes a comprehensive planning and well-controlled software and hardware acquisition process based on valid requirements and regular oversight and evaluation by agency management.

We found that SBA's

- long-range planning process—the foundation for effective acquisition, development, and operation of data processing resources—was inadequate to ensure that mission needs were met;
- management control over contractors for computer system design, development, and operation was not sound; the agency, in not controlling contract costs and contractor performance, violated federal regulations;
- procurement practices for a minicomputer for its information center were unsound and led to acquisition of a machine that did not meet the agency's technical requirements; and
- internal auditors did not sufficiently oversee data processing activities through participation in systems development and reviews of automated systems.

SBA's Long-range Planning Process Was Inadequate

Office of Management and Budget Circulars A-71 and A-130 require user participation in developing requirements, cost/benefit analyses, and management review and approval of long-range plans for agencies' data processing. In August 1984, SBA developed a long-range plan for fiscal years 1985-90. The process used to develop the plan was inadequate. For example, it did not have (1) participation and input from program and field offices, (2) analyses of user requirements or cost/benefit alternatives, and (3) top management review or approval.

As a result, important sections of the long-range plan were incomplete. The long-range plan for major changes in information technology was not based on comprehensive requirements analyses; hence, the agency had no assurance that planned acquisitions were cost effective in meeting user needs. SBA has initiated some corrective actions to strengthen its long-range planning. But additional action is needed to ensure that all information system users' needs are adequately

addressed and that top management is actively involved in reviewing and approving the final plan.

We have published guidelines for assessing the adequacy of federal data processing planning.[3] The first step to sound data processing planning is active organizational participation. That participation is critical at three levels—top management, data processing management, and information system users. Under the guidelines, the planning process should also include an analysis of the agency's information requirements, a description of the systems needed to satisfy these requirements, and the results of feasibility and cost/benefit studies for each alternative approach or system. Additionally, the process should provide for the receipt of documented input from each program, administrative, and field office. During this process top management should review, validate, and rank the information requirements, and formally approve and distribute the plan.

SBA's long-range plan for data processing for fiscal years 1985-90 estimated expenditures at $166 million. It included sections on

- Computer Sciences' priorities for installing new technology, a brief description of user requirements agencywide, and information on the locations of field users;
- the objectives and procedures for Computer Sciences' operations; and
- 5-year budgetary projections on equipment upgrades, data base and software development, computer center operations, and staffing.

The section of this plan defining user needs consisted of 1 of 83 pages. While it lacked specific descriptions and analyses, it did state that basic user needs were to (1) access centrally maintained data and (2) have the capacity to store, manipulate, and use data that are unique to each location but may not be needed at all locations.

To meet the need for data access from the central systems, SBA's plan called for a distributed processing concept—a nationwide system of information centers to facilitate the flow of information in all directions. This concept differs from the current approach whereby users must input much data, but in some instances are not provided access to any processed data. The long-range plan did not describe major hardware,

[3]Questions Designed To Aid Managers And Auditors In Assessing The ADP Planning Process, GAO/AFMD, September 30, 1982.

software, and telecommunications changes required under the distributed processing concept; it did not provide a cost/benefit analysis of installing and operating the proposed information centers. The agency's planning process was not formalized and did not include active user participation. As a result, the user-requirement section of the plan was incomplete, and SBA was left with no assurance that the planned acquisitions for equipment would meet user needs cost effectively.

Computer Sciences' representatives responsible for the plan said that their office had no written policies or procedures for long-range planning for data processing. They told us

- they adhered to past practices in preparing the plan;
- program offices in Washington were not requested to or required to provide documented input or review the plan;
- field locations were not requested to or required to contribute information on user needs to the plan; and
- only one or two offices outside of Computer Sciences received copies of the completed plan.

The representatives stated that most of the plan's information came from branch chiefs in one office—Computer Sciences. One of the representatives said that the plan underwent validation and approval by the agency's top management, but there was no evidence it was approved.

On April 1, 1985, the agency's then Administrator outlined specific efforts to strengthen planning for automation. He selected a high-level official (the Associate Deputy Administrator for Management and Administration) as chairman of a new steering committee. Its purpose was to establish planning policies and to make decisions on developing, implementing, and monitoring a long-range plan. To include the field perspective—frequently lacking in central-office planning—the committee would include the administrator of a regional office. During the summer of 1985 the committee met several times. It made recommendations that included the development of a 5-year strategic planning process. However, as of December 31, 1985, SBA had not established either the policies or guidelines for this process.

Controls Over Data Processing Contracts Were Weak

In reviewing information resources management activities at federal agencies, we have generally found that design, development, and operation of automated information systems are costly and risky; together they represent a considerable investment of financial and human resources. General Services Administration guidelines[4] also describe high costs and risks as they relate to private contractors' developing software. Computer Sciences depends on private contractors to design, develop, maintain, and operate its computer-based information systems. During fiscal year 1985, the office administered 15 contracts with seven different contractors at a cumulative cost of about $4.2 million, or 35 percent of its budget. Work performed under these contracts included design and development of specific software systems, such as payroll (four contracts totaling $594,000); operation of Computer Sciences functional areas, such as the central-office information center (two contracts totaling $820,000); and general software-development, maintenance, and technical support (nine contracts totaling $2,772,000).

According to generally accepted practices, measuring contractor performance against contractual expectations is critical to protect the government's financial interests and to ensure that it pays for only the goods and services received. SBA could not evaluate its contractors' performance due to lack of performance standards and management controls. Additionally, of the 15 contracts, the 9 software-development, maintenance, and technical-support contracts violated federal regulations that require contractors to supervise their own employees.

Contracts Lack Performance Standards and Management Controls

Regulation F-131, issued by the General Services Administration, provides guidance to agencies on contracting for software development. It recommends contractual provisions that clearly and completely define the scope and technical requirements for all types of contracts. None of SBA's contracts for data processing had completely defined scope and technical provisions; hence, SBA had no objective basis against which to measure their contractors' performance. The above-mentioned regulation stipulates that contracts should include

- specified timeframes for completing each task or system component to ensure timely completion;
- specified dollar amounts or labor hours for each major task or subtask to ensure cost control; and

[4]Federal Property Management Regulation F-131, General Services Administration, May 19, 1981.

- detailed descriptions of the characteristics of deliverables to ensure the quality of products delivered.

These provisions provide an objective basis for management control and evaluation and may be specified in the statement of work or related section of the contract. The regulations specify that when precise requirements and time of delivery are unknown, individually written task orders shall be used in lieu of a detailed statement of work. Task orders are often prepared subsequent to contract award and become part of that contract. They serve essentially the same purpose as a statement of work. The regulations also specify that task orders must include, to the extent possible, the above provisions of a contract. The detailed statement of work and/or task orders are among the most important tools for properly managing a software development or modification project, especially one involving contractor assistance.

In our November 1979 report[5] on software development contracts governmentwide, we stated that failing to stipulate the elements of satisfactory performance by contractors reduces the likelihood that the delivered software will be satisfactory. Further, the absence of clear performance objectives increases the difficulty for an agency to claim poor contractor performance.

None of the 15 contracts we reviewed incorporated performance standards and management controls. The nine general-programming and technical-support contracts contained only brief statements requiring contractor support for SBA's system-development activities. Also, the four software development contracts contained only brief statements requiring the contractor to develop specific systems. The two operational contracts described specific contractor functions, such as operating the information center and the telecommunications network, but did not include specific criteria to measure performance. None of the contracts used written task orders to further define contract costs or expectations.

Performance controls in the context of reimbursable costs are particularly important for 9 of the 15 contracts because they were awarded on a cost-plus-fixed-fee basis. Contractors for such contracts received a fixed fee in addition to the cost of the task to be performed. SBA also agreed to reimburse the contractors' allowable costs up to the contracts'

[5]Contracting For Computer Software Development—Serious Problems Require Management Attention To Avoid Wasting Additional Millions, GAO/FGMSD-80-4, November 9, 1979.

estimated costs. Because contractors are ensured of reimbursement for their costs, the cost-plus-fixed-fee contract usually offers minimal incentive for contractors to effectively manage costs. Although the agency controlled the maximum allowable costs of its contracts, it did not control individual costs for specific tasks or deliverables. SBA reimbursed contractors for all incurred costs without the benefit of controls at the detail-task level. Although the other six contracts were awarded on a firm, fixed-price basis, they amounted to labor-hour-type contracts under which the government pays a fixed-price for all hours used.

Computer Sciences representatives agreed that they had no basis in the contracts against which to measure contractor performance. They said they planned to strengthen their controls over contractors by implementing newly designed procedures for contract management, administration, and preparation of statements of work. The procedures, in a 1984 draft manual, were still under agency review, with the recommendations unimplemented, as of December 31, 1985.

SBA's contracting officer told us that in lieu of using detailed statements of work in contracts, the agency would probably incorporate a system of written task orders that would include specifications on the timeframes, cost, and deliverables. He said that these task orders would be written by the contracting officer's technical representatives. As of December 31, 1985, however, Computer Sciences had not used task orders to define contractor expectations.

General-programming and Technical-support Contracts Violated Federal Regulations

Unless authorized by specific statute, federal regulations prohibit agencies from entering into contracts wherein government employees supervise contractor employees. Yet SBA's general-programming and technical-support contracts did not abide by these regulations (about 45 contractor employees worked under the direct supervision of agency employees).

Federal regulations encourage agencies to award contracts to the private sector for commercial services (48 CFR 37.102(a)). The regulations state that nonpersonal services contracts must be written and administered so that contractor personnel are not subject to the supervision and control that usually prevail between the government and its employees. In contrast, personal services contracts, either by expressed terms or manner of administration, make the contractor personnel appear, in effect, as government employees. (That is, contractor personnel are supervised by government employees.) Federal regulations prohibit agencies from

using personal services contracts unless specifically authorized by statute (48 CFR 37.104(b)). These regulations were written to protect federal employees' rights and help maintain an arm's-length relationship between the federal and the private sector.

The supervision of employees is the federal regulations' key element in determining whether a contract is for personal services. The government is not authorized to exercise relatively continuous supervision and control over the contractor personnel. The nine general-programming and technical-support contracts violated these regulations and were—in effect—improper personal services contracts. The Congress did not by specific statute authorize SBA to award these personal services contracts. Their total cost for fiscal year 1985 is estimated at about $2.8 million.

Computer Sciences' Acting Director told us that he was unaware that the contracts violated federal regulations. However, we observed, and he confirmed, that the contractor employees generally worked alongside agency employees, performed similar duties, and were continuously supervised by SBA employees responsible for contractor and government personnel. He also told us he would request that future contracts be written to ensure compliance with federal regulations and would require each contractor to supervise its own employees.

The contracting officer agreed that the general-programming and technical-support contracts violated federal regulations. To correct this deficiency, he said that all new contracts of this type would require that the contractor designate personnel to supervise contractor employees on a daily basis. He further stated that Computer Sciences would be responsible for ensuring that the necessary supervisory provisions were followed so that the contracts would not violate federal regulations. Although the agency issued one new contract with the new supervisory provisions, four of the nine general-programming and technical-support contracts that expired on September 30, 1985, were renewed for fiscal year 1986 without the addition of supervisory provisions. The remaining five contracts were not renewed.

Unsound Procurement Practices Used in Minicomputer Purchase

Effective acquisition of hardware and telecommunications resources often presents significant procurement and technical challenges to an agency. During fiscal year 1984, Computer Sciences obligated about $671,000 to purchase data processing and related equipment. Most of these acquisitions cost less than $50,000. However, one minicomputer cost about $254,000, or 38 percent of the fiscal-year-1985 equipment

purchases. During the requirements determination process, Computer Sciences inappropriately and contrary to sound procurement policy altered its technical requirements. It did so by deleting mandatory communications requirements validated during the requirements determination process and by adding software requirements not validated by this process. This procedure was not detected during a review conducted by procurement and legal representatives. As a result—according to Computer Sciences representatives—SBA obtained a minicomputer that could neither efficiently transmit nor receive large amounts of data from the central computer and that had software capabilities the agency did not justify. Federal guidelines prohibit modification of the agency's technical requirements not approved through its accepted requirements determination process.

In a September 2, 1983, memorandum to SBA's senior management, the Assistant Administrator for Administration reported that Computer Sciences planned a unique concept with technology intended to more efficiently satisfy the agency's information requirements. The plan was to (1) acquire and install a minicomputer in a prototype information center located in the central office, (2) use high-speed telecommunications links to periodically transfer program-related information from the agency's central computer to the minicomputer, (3) permit program office users to write their own programs to access information directly from the minicomputer using "user-friendly languages," and (4) establish similar information centers in each of the agency's 10 regions and four disaster offices, based on experience gained from the prototype information center. The agency's prototype machine selection was critical because the results from this first information center would give the agency important management, cost, and technical information for the planned expansion of information centers to regional and disaster offices.

In preparing for this acquisition, Computer Sciences staff (1) performed a requirements determination that summarized the agency's functional and technical requirements, (2) surveyed the minicomputer vendors listed on the General Services Administration's data processing equipment schedule, (3) had discussions with eight interested vendors, (4) conducted a test demonstration and evaluation of two interested vendors' equipment, and (5) reported the demonstration results to the Director of Computer Sciences (who made the final selection). This acquisition strategy was valid because the minicomputer was a prototype machine.

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Federal procurement regulations (Federal Information Management Regulation 41 CFR) require a comprehensive requirements analysis before a purchase. SBA's requirements determination process identified 17 mandatory functional and technical requirements that would determine the minicomputer size. The requirements included five items specifically related to how the minicomputer must communicate with regional and central-office computers. The requirements determination process did not identify software capabilities for word processing or other office automation features.

After SBA discussed its requirements with eight minicomputer vendors, six of those vendors chose not to participate in a practical demonstration. Data General Corporation and Tandem Computers, Inc., exhibited their minicomputers. The demonstration results and comparative analysis showed that Tandem Computers successfully presented all requirements, and that Data General demonstrated all requirements except telecommunications.

On March 19, 1984, SBA awarded a contract to Data General for a Data General MV-4000 minicomputer costing about $254,000. The agency justified the contract because specific Data General capabilities, including word processing and other office-automation features not included in the 17 mandatory requirements, were "considered critical to the application of the minicomputer and not found in other demonstrators' capabilities." The word processing and office-automation requirements were established after the requirements determination process closed. Further, of the 17 mandatory requirements, the five that had previously called for specific telecommunications features were waived for this acquisition.

Computer Sciences' Director said he knew that the Data General minicomputer could not communicate efficiently on SBA's data communications network. However, he believed this requirement was not important when he made the selection because he understood that electronic devices called "communications protocol converters" were available commercially for the Data General minicomputer. He stated that these converters would solve the communications problem. A branch chief in Computer Sciences told us, however, that the agency cancelled testing of data transfer to the minicomputer in March 1985. This decision was made because SBA had searched for but not found (12 months after the contract was awarded) a protocol converter that transmitted voluminous information efficiently. So SBA has not been able to test the critical

capabilities needed to communicate with the central computer and information centers nationwide.

The Director further stated that he based his selection of Data General primarily on the word processing and office-automation software capabilities that the firm's minicomputer supported. However, the 17 mandatory requirements did not include word processing and office automation. SBA did not add these requirements until after both vendors completed their demonstrations. Computer Sciences' Chief of the Information Systems branch said that he considered the requirements for the word processing software not essential because the agency already had extensive word processing software and hardware systems in place nationwide.

SBA did not open the competition for the minicomputer to other General Services Administration-schedule vendors when the agency's needs were significantly altered (in the instance just described, where mandatory communications requirements were deleted and word processing requirements added). Because of the federal requirement to obtain the maximum practicable competition, at a minimum SBA should have contacted the vendors to discuss the changes and determine if they could meet the modifications.

The agency's Chief Counsel for Special Programs reviews key procurement documents for legal sufficiency. SBA policies also provide for oversight reviews of procurement activities by the contracting officer. According to the contracting officer, this oversight is usually limited to reviewing procurement documentation provided by the requesting program office and does not normally encompass participation by procurement and legal representatives during the requirements determination process.

The contracting officer and the Chief Counsel for Special Programs told us they reviewed documents supporting the minicomputer acquisition, but did not participate in the requirements determination and subsequent modification process. They said they were not aware of the process that Computer Sciences used to modify the requirements. Further, these officials agreed that SBA's failure to notify other interested vendors about changes in agency requirements was an unsound procurement practice. They stated that had they been aware of this practice they would not have approved the acquisition. We note that procurement regulations (Federal Information Management Regulation 41 CFR) state that data processing managers and contracting officers share

responsibility to ensure maximum practicable competition among offerors capable of meeting the government's needs.

SBA's Inspector General Has Audited Too Few Data Processing Activities

In our 1977 governmentwide review,[6] we reported to the Congress that federal agencies spend billions annually on designing, developing, and operating data processing systems; however, most agencies studied were not doing enough auditing to ensure that their computer systems were adequately controlled and were working properly. According to generally accepted practices, personnel skilled in auditing computer-based information systems normally review data processing activities.

Legislation requires that federal inspectors general comply with auditing standards established by the U.S. Comptroller General.[7] Auditing standards published by the Comptroller General in 1981 require federal auditors to review the general and application controls of functional data processing systems. This is to be done to determine whether these controls (1) have been designed according to management direction and legal requirements, (2) operate effectively to provide security over the data being processed, and (3) assure management that data is processed in a timely, accurate, and complete manner.[8]

In addition, the standards emphasize the need for federal auditors' participation during the development of new automated systems. The standards specifically require that auditors routinely review the design and development of new data processing systems and/or applications and significant modifications. Audits are important to provide management with reasonable assurance that systems are being developed with proper control.

SBA uses automated information systems in most of its programs. We identified six major automated systems, some with multiple subsystems. These and other smaller systems process over 350,000 user transactions (not including loan payments) monthly. Critical software supports the management of the agency's $14-billion loan-accounting/collection activities. SBA also has software that supports its management-assistance, procurement-and-technical-assistance, minority small-business, and

[6]Computer Auditing In The Executive Departments: Not Enough Is Being Done, FGMSD-77-82, September 28, 1977.

[7]See Public Law 95-452, Section 4(b), October 12, 1978.

[8]Standards For Audit Of Governmental Organizations, Programs, Activities, And Functions, Comptroller General, February 27, 1981.

surety-bond programs. Federal auditing standards require that software be audited regularly.

SBA's internal audit group, the Office of Inspector General, is composed of the Investigations and Audit divisions. Investigations is responsible for the overall security of the agency, including data processing security. Audit has an Office of Internal Audit that is responsible for programmatic and operational reviews of all agency activities, including data processing programs.

In our current review, we observed that SBA has not placed adequate emphasis on auditing data processing activities. Although the Inspector General has conducted two data processing reviews during the past two years, that office has not been involved—as emphasized by the Comptroller General's standards—in overseeing the design and development of the agency's new automated systems. Nor has the Inspector General evaluated the internal controls or effectiveness of either the central or local automated systems supporting agency programs.

In October 1984, the Inspector General, reporting on the agency's payroll system, concluded that "the internal controls appear to be generally adequate...." A second report focused on how well the agency's computer security oversight role was being carried out and recommended that, to improve effectiveness, the Assistant Inspector General for Investigations perform risk assessments and security evaluations of data processing systems.

The Assistant Inspector General for Audit agreed that the internal audit division should be more involved in reviewing systems. However, he said that, due to resource constraints, the office has not actively participated in reviewing the design, development, or testing of new information systems. He stated that

- only two of 70 staff members in the audit division have skills in data processing;
- the office would need three or four more trained staff to sufficiently audit automated systems and to become involved in the systems planning and development process;
- the Office of the Inspector General has no training program to teach data processing auditing skills to its auditors and does not use private contractors to independently audit data processing resources.

The Inspector General requested an additional 27 and 31 auditors for fiscal years 1985 and 1986 respectively. This increase was requested so that the office could give satisfactory coverage to audit data processing systems and other areas. An official from the Inspector General's office told us that due to budgetary constraints, the requests were not approved by the Office of Management and Budget.

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Conclusions, Recommendations, and Agency Comments and Our Evaluation

Conclusions

Some field offices have maintained manual records or developed local automated systems because the central systems lacked credibility. Some of the central systems (1) produced inaccurate information, (2) provided untimely reports, (3) did not allow users to access source data they had placed in the agency's data bases, and (4) did not contain the complete information needed to assist in managing the agency's programs. These problems may not exist at all locations. SBA did not have an adequate mechanism to identify user needs and address user concerns at any point from a system's initial design to its post-operational review. Officials in program offices in Washington defined user requirements for the field offices. Although headquarters staff may have some understanding of field-office requirements, the systems operating at the field offices we visited did not fully meet field-office user needs for information to carry out SBA's programs day-to-day.

We believe that unless SBA systematically requires involvement and input from all system users and addresses user concerns, field-office reliance on manual recordkeeping and local automated systems will persist at an added cost to the government. Based on lack of field-office user involvement in the development and post-implementation stages, SBA cannot be confident that its automated systems either fully meet user needs or effectively and efficiently assist in carrying out its mission. Increased user involvement could provide a mechanism to identify user needs and problems that have adversely affected user assurance in the central systems.

Lack of field-office participation in identifying user requirements, lack of cost/benefit analyses of alternative strategies for meeting user needs, and lack of top management involvement in the data processing planning process have contributed to acquisition of hardware and systems that do not meet the agency's needs. A planning process that involves users, analyses of alternatives, and top-management review and approval could better ensure that information requirements will (1) be identified agencywide, (2) be evaluated for estimated costs and expected benefits, and (3) serve to set objectives, strategies, and priorities for meeting requirements.

Provisions in SBA's software development, operations, and general-programming and technical-support contracts that discuss contractor performance have not been written according to federal guidelines. Contractual expectations were not sufficiently defined to allow the agency to effectively control costs and evaluate contractor performance. Without written agreements (well-developed statements of work or task

orders) with contractors on expectations, SBA has no assurance that the work performed will meet its needs.

The agency's general-programming and technical-support contracts, under which government employees supervise contractor personnel daily, are personal services contracts. SBA violated federal regulations by using such contracts. Contractor employees should have been supervised by the contractor, not by federal employees. Although agency officials told us that all new contracts would require contractors to supervise their own employees, four of the nine fiscal-year-1985 contracts renewed for fiscal year 1986 did not contain the new supervisory provisions.

In acquiring computer hardware for its prototype information center, SBA inappropriately, and contrary to sound procurement policy, revised the mandatory technical requirements during the procurement process. Because the agency did not communicate these revisions to all vendors, they were not afforded the opportunity to respond to changed requirements. This unsound practice might have been avoided through more active participation by procurement and legal representatives in key phases of the acquisition process. SBA also selected the computer based on word processing capabilities not justified during the requirements determination process and waived important telecommunications requirements. These actions resulted in the acquisition of a minicomputer that did not meet the agency's technical requirements.

SBA has not performed the necessary data processing management audits of general and application controls to ensure that hardware and software are being effectively acquired, designed, and operated. The nature of the problems and weaknesses discussed in this report, coupled with the agency's heavy reliance on its automated systems to assist in program administration, underscores the need for the Office of Inspector General to intensify audits of data processing systems' design, development, and operation.

Recommendations

To make SBA's automated systems more useful to program and field offices and to strengthen information resources management activities, we recommend that the Acting Administrator

- Implement policies and procedures to require user participation during the design, review, and operation of automated systems. These procedures should ensure that user needs are addressed during the design

stages, and system effectiveness is evaluated through regular post-implementation reviews after the system becomes operational.

- Establish a comprehensive planning process for information resources. It should require program and field offices to identify information requirements, including the potential costs and benefits. The resulting plan, based on consolidated, agencywide requirements, should establish objectives, strategies, and priorities for meeting the information requirements. Top management should be actively involved in reviewing and approving the plan.
- Strengthen contracting procedures for software development, operations, and general-programming and technical-support contracts to allow SBA to adequately monitor contractor performance. At a minimum, such procedures should require contract managers to use detailed statements of work or written task orders that set forth cost estimates, timeframes, and specifications for contract deliverables.
- Insert provisions in current and new contracts to comply with federal regulations covering personal services contracts. These provisions should require contractors to supervise their own personnel.
- Strengthen the management of data processing acquisitions by establishing written policies and guidelines requiring procurement and legal representatives to more actively review and participate in all phases of the procurement process, including the requirements determination and contract modification phases.
- Provide the Office of the Inspector General with the resources needed to place more emphasis on reviews of information resource management activities, including reviews of general and application controls of automated systems under development and in operation.

Agency Comments and Our Evaluation

SBA agreed with five of our six recommendations, but did not address our findings or conclusions. The agency stated that it had initiated corrective actions that it believes would improve computer operations. Some of the recent initiatives appear to be a step in the right direction to implementing the report's recommendations. When the recommendations are fully implemented, information resources management activities should improve.

SBA stated that its current policy of relying on the central office to coordinate the development and modification of automated systems is working. We believe, however, that SBA needs to formalize policies and procedures requiring field-office participation to ensure its involvement in systems design and post-implementation reviews. We continue to believe that the insufficient level of field-office participation and the

agency's reliance on the central office may not correct the problems resulting from the lack of user involvement.

SBA also said that it believes its current level of emphasis on automatic data processing audits by the Inspector General's office is all it can do, given its resource level and other demands. We believe that SBA's current level of reviewing automated systems, from an internal control viewpoint, does not assure management that internal controls are incorporated in the automated systems during the design and operational phases. (See appendix III for SBA's specific comments and our response to those comments.)

Request Letter

BERKLEY BEDELL, IOWA
Chairman

United States House of Representatives
Committee on Small Business
Subcommittee on General Oversight and the Economy
B-363 Rayburn House Office Building
Washington, D.C. 20515

January 16, 1984

Mr. Charles Bowsher
Comptroller General
U.S. General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Bowsher:

The Small Business Administration estimated in its budget submissions that by the end of the current fiscal year there will be about $14 billion in outstanding loans under its direct and guaranteed lending programs. The ability of the SBA to effectively administer these programs is highly dependent on the automated information technology that supports their loan activities. Weaknesses in any of the systems that support loan administration could have a negative impact on small businesses nationwide and is of considerable concern to the Small Business Oversight Subcommittee, which I chair.

SBA plans to spend about $12 million for automated data processing support during FY84, about half of which is for software development. Because of the problems your office noted in SBA's development and maintenance of their other automated information systems, including the Procurement Automated Source System, the Oversight Subcommittee wishes to be informed about the effectiveness of all of SBA's computer-based systems needed to meet its mission and program objectives.

Accordingly, I am requesting that you initiate a study of SBA's overall computer-based information activities, including a detailed review of the automated software that supports SBA's loan programs and management information systems. The GAO's study should evaluate SBA's oversight and management performance as well as the performance and capabilities of SBA's computer service management contractors.

If you have any questions about this request, please call Mark Levine of the Oversight Subcommittee staff ar 225-3944.

Sincerely,

Berkley Bedell

Berkley Bedell

Appendix II

Field Offices Visited

Chicago Region
Chicago Regional Office
Chicago District Office
Indianapolis (IN) District Office
Minneapolis (MN) District Office
Springfield (IL) Branch Office
Kansas City Region
Kansas City Regional Office
Kansas City District Office
Springfield (MO) Branch Office
Cedar Rapids (IA) District Office
Omaha (NE) District Office
New York Region
New York Regional Office
New York District Office
Melville (NY) Branch Office
Syracuse (NY) District Office
Buffalo (NY) Branch Office
Elmira (NY) Branch Office
San Francisco Region
San Francisco Regional Office
San Francisco District Office
Fresno (CA) District Office
Las Vegas (NV) District Office
Phoenix (AZ) District Office
Philadelphia Regional Office
Detroit District Office

Comments from the Small Business Administration

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

OFFICE OF THE ADMINISTRATOR

U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416

JUN 20 1986

J. Dexter Peach, Director
Resources, Community and Economic
Development Division
U. S. General Accounting Office
414 G Street, N. W.
Washington, D. C. 20548

Dear Mr. Peach:

As requested by your letter of May 15, 1986, enclosed are our comments on your draft report, entitled, "Data Processing: SBA Needs to Strengthen Management of Its Computer Systems".

We appreciate the opportunity to comment on this report and if you need any further information, please advise.

Sincerely,

Charles L. Heatherly
Acting Administrator

Enclosure

SMALL BUSINESS ADMINISTRATION'S COMMENTS
ON THE UNITED STATES GENERAL ACCOUNTING OFFICE
DRAFT REPORT ENTITLED, "DATA PROCESSING: SBA NEEDS
TO STRENGTHEN MANAGEMENT OF ITS COMPUTER SYSTEM"

The following are SBA's comments on the issues raised by each of the recommendations made to the Administrator to strengthen SBA's management of data processing:

1. GAO Recommendation

--Implement policies and procedures requiring field-office user participation during the design and operation of automated systems.

SBA Comments

In the past, the decision as to whether field personnel should be involved in the design of automated systems has been the responsibility of the functional proponent (Central Office) which oversees the area being automated. As new automated systems are developed, we find that more program offices are now heavily involving field personnel in system design. A notable instance, subsequent to this GAO visit, was the Delinquent Loan Collection System (DLCS). This system was designed by loan collection personnel for use by loan collection personnel. It is now being considered by other government agencies for adoption as a tool to assist in their loan collection process.

The policy and procedure is to coordinate development and modifications through the central program office. The systems that have been developed recently have had representation from the field and have also been piloted in the field prior to implementation.

See comment 1.

2. GAO Recommendation

--Establish a comprehensive planning process for information resources management

SBA Comments

An ADP Acquisition Committee comprised of the Assistant Administrator for Information Resources Management, the Assistant Administrator for Administration, their Deputies, the Director of Procurement and Grants Management, his staff of Contracting Officers involved with ADP procurements, and OIRM technical staff members was established in April of 1986. It meets on a monthly basis to discuss all current ADP procurements, and on an ad hoc basis regarding major acquisitions involving milestone charts, reviews and open communications. In the case of

See comment 2.

the ad hoc activity any one of the committee members can call a meeting at any time in order to resolve a current ADP procurement problem--this should effectively preclude any further similar circumstances such as those described in the report.

3. GAO Recommendation

--Strengthen contracting procedures for software development, operations, and general-programming and technical-support contracts by requiring the use of statements of work, timetables, and specifications of deliverables.

SBA Comments

Specific tasks performed under general programming are handled by our user request system, SBA Form 863. These requests specify what changes are to be accomplished and the intended results, e.g., new report, modified report, or change in the functional operation of the system. Team leaders set the timeframe for completion and keep track of who has responsibility for the task. A user request report is provided for review showing assignment, requestor and actual and estimated start/finish dates. A new work plan technique has also been implemented to augment the existing system.

Office of Information Resources Management personnel and the Office of Procurement and Grants Management are working together to formalize and strengthen the task order process for use in the contracts. Although monitoring is currently being done in OIRM, it is agreed that the procedures for assigning and evaluating tasks should be clearly spelled out as part of the contract.

See comment 3.

4. GAO Recommendation

--Modify its contracts to require contractors to supervise their own employees.

SBA Comments

OIRM has taken steps to ensure that SBA personnel do not supervise, or give the appearance of supervising, contractor personnel. Recent contracts have used both a task order format and a Project Manager (PM) concept wherein the COTR (SBA) and the PM (contractor) have two way communication, and any employee tasking is done solely by the PM. Contracts that are presently active and do not contain proper clauses relative to contractor supervision will be modified.

See comment 4.

New contracts being written require a contract project leader to interface with an SBA team leader only. Additionally, steps have been taken and are scheduled to be completed by the end of FY 1986 to have specific contractors responsible for a total system or subsystem. This will eliminate any appearance of a contractor being supervised by an SBA employee. We are also restructuring our work area to physically separate the contractors from SBA personnel.

5. GAO Recommendation

--Strengthen the management of data processing acquisitions by requiring more active involvement of SBA's procurement and legal representatives.

SBA Comments

See comment 5.

Management changes in OIRM, closer examination by procurement and legal officials, and oversight from the Office of Inspector General will strengthen the management of data processing acquisitions.

6. GAO Recommendation

Now on pp. 35 and 36.

--Intensify reviews of information resource management activities by the Office of Inspector General. (See pp. 49-51)

SBA Comments

See comment 6.

Given the resources and the numerous other activities of the Agency needing reviews by the Office of Inspector General, we will need to continue to use our resources in a balanced manner. At the present time eight percent of our Internal Audit resources are dedicated to the review of Data Processing. This is high as compared to other important activities of SBA requiring internal review. At the present time we do have an ADP review in process concerning an evaluation of computer generated reports.

The following are GAO's comments on the Small Business Administration's letter dated June 20, 1986.

GAO Comments

1. Despite the recent initiatives, we believe that SBA's policy of having the central offices decide the nature and extent of field-office involvement is not sufficient. Increased field-office participation is imperative to (1) meet the field offices' specific information needs and (2) satisfy the complex tasks of designing, modifying, and operating automated systems and the post-implementation reviews. We believe that SBA needs to establish formal guidance and policies for this user involvement. SBA's stated successful involvement of users in the design of its Delinquent Loan Collection System is further evidence of the need for formal policies in this regard.

2. We agree that this committee should facilitate the planning process recommended. However, we believe that SBA addresses only one aspect of information resources management planning—the management review segment—but should implement the remaining components identified in this report. A comprehensive planning process would (1) require continuous program and field-office participation in identifying information requirements and conducting cost/benefit analyses for the proposed systems; (2) be based on consolidated, agencywide requirements; and (3) include objectives, strategies, and priorities to meet agencywide information requirements. Moreover, top management needs to increase its level of involvement throughout the planning process, particularly in the review and approval phases.

3. We believe that SBA's current initiative as outlined represents a good first step. However, increased controls and a formal management system need to be established. If all automatic data processing contracts show systematic control and include cost estimates, timeframes, and deliverable specifications, then the agency will be responsive to our recommendation.

4. These current and planned actions respond to our recommendation.

5. SBA's statement is too general for an appropriate evaluation: it does not provide sufficient information on the nature and extent of planned changes. The potential effectiveness of these changes cannot be evaluated until the new procedures are incorporated into written policies.

6. We continue to believe that SBA's audit coverage of data processing activities is insufficient. Over the the past 3 years SBA has completed two data processing reviews, neither of which addressed systems that support major agency programs. An automatic data processing review to evaluate the usefulness of the reports produced by a system supporting a major program is currently being planned, according to our follow-up work. Because automated systems support most of the agency's programs, SBA should emphasize review of systems supporting major programs to assure management that internal controls are properly incorporated during the design and operational phases.

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